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This study aimed at assessing the role of Maliwanda and Namhula irrigation schemes on farmers' livelihoods in Bunda district, Mara region where crop production is primarily rain fed. The district has been repeatedly struck by drought due to insufficient and erratic rainfalls. The establishment of Maliwanda (2010) and Namhula (1999) irrigation schemes in the district aimed at improving smallholder farmers' living standards, with a particular emphasis on cereal production, particularly through paddy production. However, the contribution of the two schemes to livelihoods in the area is currently not well documented. Thus the objective of this research was to assess the extent to which the two irrigation schemes had improved farmers' livelihoods in the study area. Three specific objectives guided the study: first, to examine management practices of the Maliwanda and Namhula irrigation schemes; second, to determine the production trend of paddy in the five years before and after the implementation of irrigation schemes; and third to ascertain the contribution of irrigation schemes to smallholder farmers' livelihoods. The study employed quantitative and qualitative research design in gathering, processing and analysing data. It involved 157 respondents and collected data through questionnaires, interviews, observation and documentary review. The analysis of quantitative data was by using the IBM Statistical Package for Social Sciences (SPSS) version 20 whereas qualitative data was subjected to content analysis together with Ms Excel. The presentation of findings was in frequencies, percentages, distribution tables and figures. The findings indicate that Maliwanda and Namhula irrigation schemes have contributed significantly to smallholders' livelihoods than before the implementation of the two schemes in the study area. The effective management of irrigation system is an essential for sustainability of the irrigation scheme. The study found that operation and maintenance (O&M) reduces silting and sedimentation of irrigation canals. This allows efficient water flows and reduces the rate of water losses through seepage and evaporation. The yield of paddy after project inception is higher than for other cereals which often suffer from water stress. The findings indicate that irrigation has increased paddy yield by over 5 tons per hectare while before the launching of the schemes the yield was

less than 2 tons per hectare. The development of these irrigation schemes has also increased income levels of the smallholder farmers engaged in irrigation, off farm employment and family assets accumulation have improved than before. The household survey indicates that food security to majority of respondents is ensured throughout the year. The researcher recommends that in order to achieve sustainability, the water association should be strengthened, annual fees increased and human activities around the schemes should be restricted in order to avoid silting of the dams. Thus, it can be concluded that the two irrigation schemes have enabled smallholder farmers to minimize crop failure due to enhanced productivity hence, reducing poverty and improving rural livelihoods.